

No. 18173

IN THE

**United States Court of Appeals
for the Ninth Circuit**

COAST METALS, INC., a corporation,
Plaintiff-Appellant,

vs.

WALL COLMONOY CORPORATION, a corporation,
Defendant-Appellee

BRIEF FOR DEFENDANT-APPELLEE

LYON & LYON,
CHARLES G. LYON,

Attorneys for Wall Colmonoy Cor-
poration, Defendant-Appellee,
811 West Seventh Street,
Los Angeles 17, California.

Of Counsel:

DON K. HARNESS,
NEAL A. WALDROP,
HARNESS, DICKEY & PIERCE,
7-141 General Motors Building,
Detroit 2, Michigan.

FILED

DEC 20 1962

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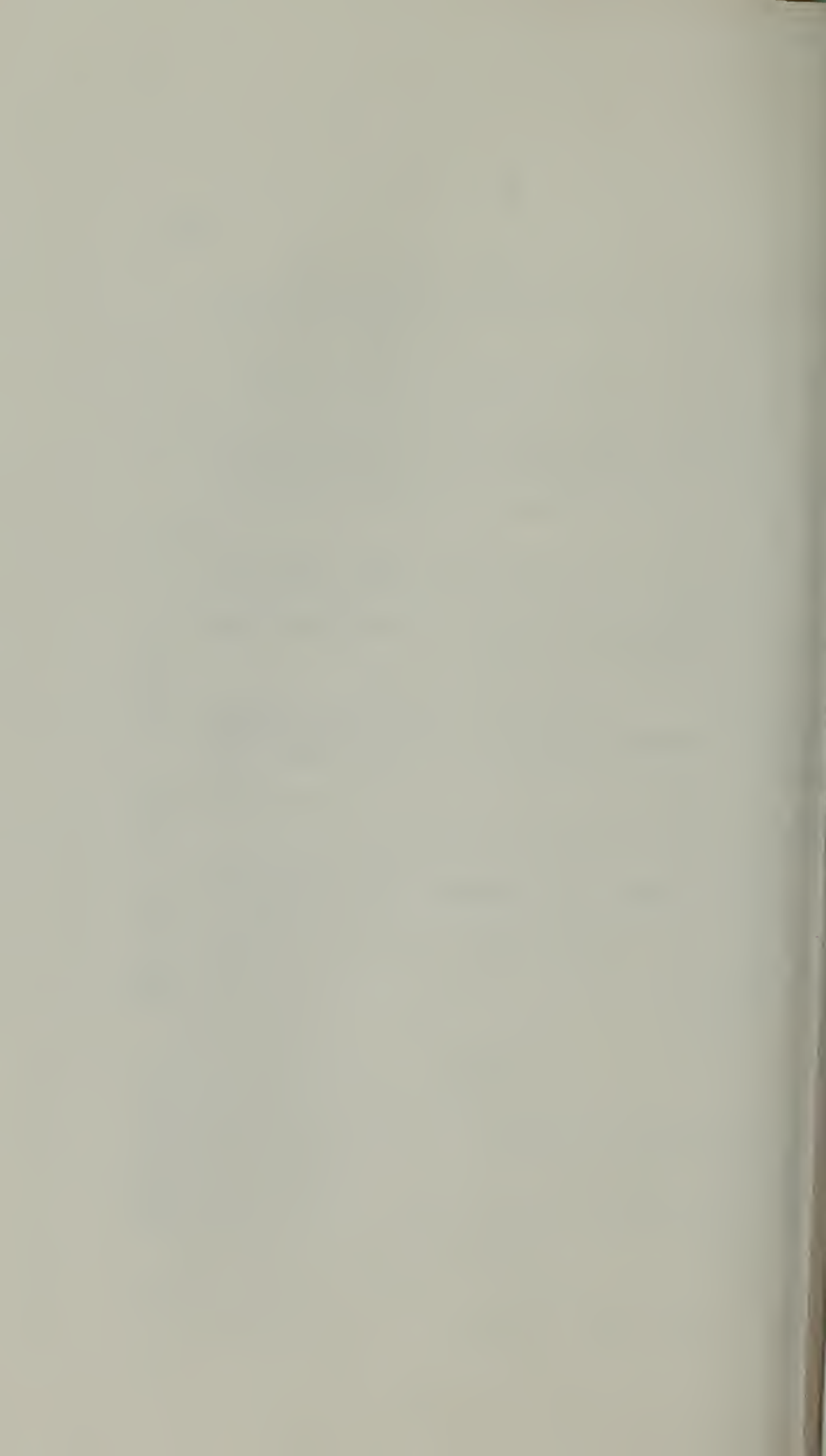
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JURISDICTIONAL STATEMENT

Defendant-Appellee concurs in the jurisdictional statement appearing in Plaintiff-Appellant's Brief and does not challenge the jurisdiction of this court.

STATEMENT OF THE CASE

A. The Issues.

Plaintiff-Appellant, Coast Metals, Inc. (hereinafter referred to as "Coast Metals") brought suit against Defendant-Appellee, Wall Colmonoy Corporation, hereinafter re-

ferred to as "Wall Colmonoy") for infringement of United States patent No. 2,743,177 (hereinafter referred to as "'177 patent") and United States patent No. 2,755,183 (hereinafter referred to as "'183 patent") both of which are entitled "Nickel-Silicon-Boron Alloys" and all of the claims of which refer to "An alloy which is especially adapted for hard facing at relatively low temperatures * * *". Coast Metals charged that Wall Colmonoy's nickel base alloy designated as its "LM Nicrobraz" infringed the '183 patent and that its nickel base alloy designated as "Nicrobraz 130", which is not sold for hard facing, but only for brazing or joining parts together, infringed the '177 patent.

After full trial on the issues the District Court found both of the patents in suit invalid and not infringed by Wall Colmonoy by reason of prior invention, prior use, not for experimental purposes, by Plaintiff, Defendant and others beyond the statutory period, citing 35 USCA, Section 102(a) and Section 102(b). The District Court entered Findings of Fact, Conclusions of Law and Judgment on June 28, 1962.

Coast Metals did not appeal from the District Court's decision and judgment holding the '183 patent invalid and not infringed by Wall Colmonoy. Coast Metals has appealed from the judgment of the District Court holding claims 1, 3 and 4 of the '177 patent invalid and not infringed. The judgment of the District Court of invalidity and non-infringement with respect to the '183 patent is thus final and binding upon Appellant, Coast Metals.

The patent application which resulted in the '177 patent was filed in the United States Patent Office on May 2, 1952 and the patent application which resulted in the invalid '183 patent was filed in the United States Patent

Office on January 25, 1955. Both the '177 patent and the '183 patent relate to nickel, silicon, boron alloys which, according to the patent claims, are especially adapted for hard facing. Hard facing refers to the coating of a surface with an alloy that will provide improved resistance against wear, corrosion, oxidation and abrasion.

B. Wall Colmonoy Prior Art Alloys.

Wall Colmonoy, prior to 1951 and more than one year prior to the filing of the patent application which resulted in the '177 patent, originated and commercially sold a family of nickel base, hard facing alloys for protecting metal surfaces including alloys designated as Colmonoy No. 4, Colmonoy No. 5, Colmonoy No. 6 and Colmonoy No. 20. These alloys contained varying proportions of nickel, silicon, boron, chromium and iron and demonstrated that variations in the proportions of the elements while affecting some properties of the alloys such as melting points, hardness and the like did not produce entirely new alloys or non-analogous results (Finding of Fact No. 6 at C. R. 47). Wall Colmonoy's alloys had been extensively sold and used since the early 1940's and Coast Metals had no alloys comparable thereto until after the filing of the patent application which resulted in the '177 patent in suit.

C. The Alloys of Coast Metals and Cape '177 in Suit.

Coast Metals corporate director, A. T. Cape, assignor of the patents in suit to Coast Metals, developed for Coast Metals the alloys referred to in the patents in suit to provide Coast Metals with alloys which would compete with the alloys then being commercially sold and used by Wall Colmonoy (R. T. 88).

The alloys disclosed in the '177 patent and the '183 patent both contain nickel and like amounts of silicon and boron. The alloys of the '177 patent may contain up to 5% chromium and iron combined while the alloys disclosed in the invalid '183 patent contain 5% to 12% chromium and iron combined. The alloys coming within the scope of the '177 patent in suit contain silicon in amounts from about 2.5% to about 5.5%, boron in an amount from about 0.75% to about 5.25%, with the balance or remainder of the alloy being substantially all nickel, but as stated in the '177 patent (Exhibit 1 at C.R. 72), Column 1, lines 61-66:

“It being understood, however, that wherever the expression ‘remainder substantially all nickel’ is used in the present specification and claims, said expression is to be construed as including, whenever present in the alloy, small amounts of iron, manganese and chromium, in a total amount of less than 5%.”

The '177 patent states in Column 1, lines 15-24, that the alloys disclosed therein have certain unusual properties or uses such as the ability to adhere to stainless steel and to pure molybdenum, the ability to braze or join strips or plates of stainless steel and hard face molybdenum, the ability to be used for hard facing at relatively low temperatures where resistance to wear, impact, corrosion and oxidation are vital factors, the ability to resist oxidation at temperatures up to their melting points, the ability to be applied as facings to poppet valves with more ease than other commonly known facing metals, the ability to be bonded with a variety of base metals, the ability of being plastically formable over a wide range of temperatures as great as 150° to 350°F and the ability to be “sweated” to surfaces at temperatures below 2100°F. The '177 patent

(Column 2, lines 15-19) defines the low melting points referred to in the patent to be between 1750°F and 2100°F.

The '183 patent (Plaintiff's Exhibit 2 at C.R. 74) which has been adjudicated to be invalid, relates to a series of alloys containing the same range of silicon and boron as the '177 patent but containing more chromium and iron than the alloys referred to in the '177 patent. The '183 patent refers to the previously issued '177 patent and the alloys disclosed therein and states at lines 32-37:

“* * * I have discovered as the result of further research in connection with alloys of this type that the properties of the aforesaid alloys in certain directions can be marked improved by incorporating in the alloy chromium and iron in definite combined amounts greater than used in the alloys of said copending application.”

The “aforesaid alloys” referred to in the '183 patent are the alloys disclosed in the '177 patent and “said copending application” referred to in the '183 patent is the patent application which issued into the '177 patent in suit.

The '183 patent further states that the use of chromium and iron in the improved alloys disclosed therein is mandatory instead of optional as in the alloys covered in the '177 patent. The '183 patent further states (Column 1, lines 46-49) that the alloys referred to in the '183 patent have “in addition to the other advantageous properties obtained in the alloys of the copending application”, which resulted in the '177 patent, further advantages such as reducing the tendency of the boron and silicon of the alloys to become oxidized, more accurately maintaining the properties of the alloys and increasing the microconstituent hardness of the alloys ('183 patent, Column 1, lines 46-61).

It is, therefore, clear that the invalid '183 patent covers alloys which have all the advantages and properties of the alloys disclosed in the '177 patent as well as certain additional advantages and improved properties. The litigation, therefore, stands in the unusual position that the '183 patent, which covers improved alloys having all of the properties of the alloys disclosed in the '177 patent, has been finally adjudicated invalid because of the prior use and sale of Colmonoy alloys Nos. 4, 5, 6 and 20 by Wall Colmonoy while Coast Metals is appealing the judgment of the District Court holding invalid the '177 patent, because of the prior use and sale of Colmonoy alloys Nos. 4, 5, 6 and 20.

As is clear from reading the '177 patent and the '183 patent the claims of these patents do not cover a single alloy or a single alloy composition but as stated by the District Court's unchallenged Findings of Fact No. 5 (C.R. 47):

“The patent claims in suit do not relate to any one alloy but rather cover a large number of specific nickel base, hard facing alloys in which the proportions of each of the ingredients or constituents can be varied within the compositional ranges set forth therein.”

By varying the percentages or proportions of the ingredients in the alloys coming within the wide ranges set forth in the patent claims certain of the properties of alloys, such as melting point, hardness, etc. will change or vary slightly, as would be expected, and Coast Metals has admitted that it sells two different alloys, its No. 50 and its No. 52, both within the scope of the '177 patent, which have different melting points, different hardnesses, different resistance to wear and are used for different purposes (No. 24 at C.R. 190).

It has always been the position of Wall Colmonoy, which is supported by the Findings of Fact and Conclusions of Law of the District Court, that the alloys covered by the claims of the '177 patent and Wall Colmonoy's prior used and sold alloys so overlap and are so interrelated in their properties that the broad range of chemical compositions called for in the patent claims do not define invention and do not define new and substantially different alloys as required for patentability. The evidence in the record clearly establishes that claims 1, 3 and 4 of the '177 patent are invalid and do not define patentable invention over the prior knowledge, use and sale by Wall Colmonoy and others in the nickel base alloy field.

D. The Patent Office Was Misled Into Issuing the '177 Patent in Suit.

The evidence in the record clearly shows that the United States Patent Office Examiner would not have allowed claims 1, 3 and 4 of the '177 patent in suit in view of prior art British patent No. 580,686 (Exhibit F at C. R. 207) if he had not been misled by the attorney for Coast Metals. Coast Metals' attorney argued that the British patent required the presence of aluminum in the alloy and that the presence of any aluminum in the alloys of the '177 patent would be deleterious and destroy their ability to adhere to stainless steel and molybdenum. This evidence shows this is not true. Coast Metals' attorney made other allegations which the Patent Officer Examiner accepted as true which were not true. The misleading of the Patent Office destroyed the presumption of validity of the '177 patent because it never would have issued if the Patent Office had not been misled.

SUMMARY OF ARGUMENT

The District Court properly held claims 1, 3 and 4 invalid and not infringed by Wall Colmonoy Microbraz 130 alloy. All of its Findings of Fact are supported by the evidence in the record and based on these Findings the conclusions of law that the patent is invalid are sound under the patent laws and the courts' interpretations of these laws.

The judgment of the District Court should be affirmed because:

1. Claims 1, 3 and 4 of the '177 patent in suit cover not only alloys containing nickel, silicon and boron, but also alloys containing up to 5% chromium and iron and are, therefore, so broad in their scope as not to distinguish from other alloys sold by Coast Metals and Wall Colmonoy, including prior art alloys sold by Wall Colmonoy more than one year prior to the filing of the patent application which resulted in the issuance of the '177 patent in suit.

2. Claims 1, 3 and 4 of the '177 patent do not cover a single alloy, but cover a wide range of alloys having physical, service and use properties which vary and which overlap and are not distinguishable from other alloys outside the scope of the '177 patent including alloys sold by Coast Metals and alloys in public use and on sale by Wall Colmonoy more than one year prior to the filing of the patent application which resulted in the issuance of the '177 patent.

3. Wall Colmonoy had for many years prior to the filing of the patent application which resulted in the

'177 patent in suit sold and publicly used alloys designated as Colmonoy No. 4, No. 5, No. 6 and No. 20 which contain varying proportions of nickel, silicon, boron, chromium and iron and these alloys had varying physical, service and use properties from which the alloys covered by the '177 patent in suit either did not differ or differed only in degree so that no new, unobvious or patentable alloys are defined or distinctly claimed in claims 1, 3 and 4 of the '177 patent.

4. The alloys disclosed and claimed in the '177 patent in suit do not differ to any significant degree or extent from alloys disclosed and claimed in the Coast Metals '183 patent in suit which was held invalid by the District Court and from which judgment no appeal has been taken by Coast Metals. The alloys disclosed and claimed in the invalid '183 patent had all of the advantages and properties of the alloys covered by the '177 patent in suit and the '183 patent was finally adjudicated to be invalid because of the use and sale of the same prior art Wall Colmonoy alloys which the District Court held anticipated and invalidated claims 1, 3 and 4 of the '177 patent in suit.

5. Claims 1, 3 and 4 of the '177 patent in suit do not clearly point out and distinctly claim any invention and are indefinite and, therefore, invalid under the patent laws.

6. All of the Findings of Fact of the District Court which have been challenged by Coast Metals are supported by evidence in the record, are not erroneous and should not be disturbed or overruled by this Court.

7. Any differences which might exist between the physical service or use properties of alloys covered by the claims of the '177 patent over publicly known and

used alloys are differences in degree only and no startling or unexpected new or non-analogous results are obtained and, therefore, the claims do not define patentable invention and are invalid.

8. The Patent Office was misled into issuing the '177 patent in suit and would not have issued this patent had it not been misled by improper and untrue statements made by the Coast Metals attorney during the prosecution of the patent application which resulted in the '177 patent.

ARGUMENT

I.

CLAIMS 1, 3 AND 4 OF THE '177 PATENT COVER NOT ONLY ALLOYS CONTAINING NICKEL, SILICON AND BORON BUT ALSO ALLOYS CONTAINING UP TO 5% OF CHROMIUM AND IRON.

Appellant's specification of error No. 8 appearing at page 13 of its Brief alleges that the District Court erred in holding that claims 1, 3 and 4 of the '177 patent cover alloys containing not only nickel, silicon and boron but also alloys containing in addition up to 5% chromium and iron combined or chromium, iron and manganese combined. Appellant has argued in its Brief at pages 62-64 that Finding of Fact No. 7 made by the District Court is erroneous in this connection. Findings of Fact No. 7 C. R. 47-48) reads as follows:

“The evidence, including the specification of the '177 patent (Column 1, lines 61-66) and Plaintiff's Answers to Defendant's Interrogatories No. 10 and 11 (Defendant's Exhibit C) makes it clear that

claims 1, 3 and 4 of the '177 patent cover alloys containing not only nickel, silicon and boron but also alloys containing in addition up to 5% of chromium and iron combined or chromium, iron and manganese combined."

This Finding of Fact No. 7 is based upon clear evidence including the '177 patent itself (C.R. 72), Plaintiff's Answers to Defendant's Interrogatories No. 10 and 11 (Exhibit C at C.R. 159 and 160) and the testimony of the alleged inventor, A. T. Cape (R.T. 73 and 76-79). The '177 patent states in Column 1, lines 61-66:

"* * * it being understood, however, that whenever the expression 'remainder substantially all nickel' is used in the present specification and claims said expression is to be construed as including, whenever present in the alloy, small amounts of iron, manganese and chromium, in a total amount of less than 5%."

In the '183 patent (Exhibit 2 at C.R. 74), which has been adjudicated to be invalid and from which adjudication no appeal has been taken by Coast Metals, it is stated at lines 32-37:

"I have discovered, as the result of further research in connection with alloys of this type, that the properties of the aforesaid alloys in certain directions can be markedly improved by incorporating in the alloy chromium and iron in definite combined amounts greater than used in the alloys of said copending application."

The "copending application" referred to in the aforesaid quotation from the '183 patent is the patent application which resulted in the '177 patent in suit and the "aforesaid alloys" referred to in the aforesaid quotation are the alloys referred to in the '177 patent in suit.

It is thus clear from the aforementioned quotations from the '177 patent and the '183 patent that the alloys referred to in the '177 patent in suit may contain up to 5% of chromium, iron and manganese and that the alloys of the '183 patent, which constitute an improvement over the alloys disclosed in the '177 patent, contain an even greater amount of chromium and iron than the alloys of the '177 patent. In view of these two statements above, there is no basis for Coast Metals' statements and arguments that appear at pages 3, 19, 23, 25, 29, 42, 45 and 62 of its Brief that claims 1, 3 and 4 cover alloys containing only three elements, namely, nickel, silicon and boron, and not alloys containing significant amounts of chromium and iron. Coast Metals' position is further contradicted by its Answers to Wall Colmonoy's Interrogatories No. 10 and 11 (Exhibit C at C.R. 159 and 160) wherein Coast Metals contended that alloys made by Wall Colmonoy and containing chromium and iron as well as nickel, silicon and boron infringed claims of the '177 patent in suit. During the trial Coast Metals corporate director, A. T. Cape, who assigned the patents in suit to Coast Metals testified positively that there could be up to 5% of chromium, iron and manganese in alloys covered by the '177 patent and that all alloys disclosed in the '177 patent, including those containing up to 5% chromium and iron would have substantially the same properties (R.T. 64, 65 and 73). There is no evidence in the record to the contrary.

Appellant, at pages 62 through 64 of its Brief, while arguing to the contrary, has in reality confirmed the finding of the District Court, although it argues that the '177 patent only recognizes that chromium and iron may be in the alloys as residual elements or impurities introduced into the alloy through raw materials used in their preparation. The patent makes no such statement but simply says

that there may be up to 5% of chromium, iron and manganese in the alloys covered by the specification and claims. The permissible presence of such substantial proportions of these elements certainly cannot be considered as only a tolerance in the alloys of "small amounts of impurities or residual materials" as Coast Metals now likes to call them in an effort to save its patent. It is obvious from the evidence in the record, referred to above, that claims 1, 3 and 4 of the '177 patent cover alloys which may contain not only nickel, silicon and boron as constituents but also substantial proportions of chromium, iron and /or manganese, up to 5%. Now, because it is adverse to its position Coast Metals is arguing that these patent claims cover only alloys containing three constituents, namely, nickel, silicon and boron plus some impurities that may unavoidably creep into the alloy during manufacture of the same. This is sheer argument which is contrary to the evidence in the case. Finding of Fact No. 7 (C.R. 47-48) does not say that there must be chromium, iron or manganese in the alloys covered by claims 1, 3 and 4 of the '177 patent, but simply says that the claim is broad enough to cover alloys containing up to 5% of these constituents. In view of the fact that claims 3 and 4 of the '177 patent are dependent upon claim 1 and, therefore, include all of the constituents of claim 1, they cover alloys containing up to 5% chromium, iron and manganese in the same manner as claim 1 and cannot be otherwise construed.

When the District Court found that claims 1, 3 and 4 of the '177 patent were broad enough to cover alloys containing not only nickel, silicon and boron, but also containing up to 5% of chromium, iron and manganese or chromium and iron, it had determined the scope or breadth of these patent claims and defined the alloys covered thereby. The District Court then had the right and duty

to determine whether claims 1, 3 and 4 of the '177 patent define or cover alloys that were patently new or different from alloys which had been on public use or sale more than one year prior to the filing in the United States Patent Office of the patent application which resulted in the '177 patent (35 USCA, Section 102(b)). The District Court did this and held claims 1, 3 and 4 of the '177 patent invalid on several grounds which will be hereinafter discussed. This Court has often said:

“This court has consistently held that the question of validity of a claim of a patent is one of fact. The findings of a judge upon novelty, utility and invention are entitled to great weight when made after trial of these issues. The court will respect such findings unless the record shows these to be ‘clearly erroneous.’” *Stauffer v. Slenderella Systems of California*, 254 F 2d 127, CA9.

See also *Oriental Foods, Inc. v. Chun King Sales, Inc.*, 244 F. 2d 909, CA 9; *Hall v. Wright*, 240 F. 2d 787, CA 9; *Schmeiser v. Thomasian*, 227 F. 2d 875, CA 9.

II.

CLAIMS 1, 3 AND FOUR OF THE '177 PATENT DO NOT COVER A SINGLE ALLOY BUT COVER A WIDE RANGE OF ALLOYS.

None of claims 1, 3 and 4 of the '177 patent (Exhibit 1 at C. R. 72) cover a single alloy containing definite, fixed amounts or proportions of each constituent but rather the patent claims cover a large number of specific nickel base, hard facing alloys in which the proportions of each of the ingredients or constituents can be varied within the compositional ranges set forth therein (see unchallenged Finding of Fact No. 5 at C. R. 47). For instance, claim 1

of the '177 patent states that the amount of silicon is between about 2.5% and about 5.5% and that the amount of boron is between about 0.75% and about 5.25%, and, as pointed out above, there can be up to 5% of chromium, iron and manganese, with the balance of the alloy being nickel. There are, therefore, literally hundreds of alloys which can be made within the scope of the claims of the '177 patent.

This is highlighted by Coast Metals' allegations that not only does Wall Colmonoy's Microbraz 130 alloy infringe the claims of the '177 patent, but also the other Wall Colmonoy alloys referred to in Coast Metals' Answers to Wall Colmonoy's Interrogatories Nos. 10 and 11 (Exhibit C at C.R. 159 and 160) infringe one or more of the claims of the '177 patent. The chemical compositions of these three different alloys, all alleged to infringe claims of the '177 patent are set forth below.

	Microbraz 130 (Exhibit 3 at C. R. 75)	Wall Colmonoy Alloy Referred to in Int. 10 (at C. R. 159)	Wall Colmonoy Alloy Referred to in Int. 11 (at C. R. 160)
Silicon	4.0%-5.0%	2.5%-5.5%	2.5%-5.5%
Boron	3.0%-3.5%	0.75%-5.25%	0.75%-5.25%
Carbon	0.6% max.	0.10%-0.15%	0.03%-0.17%
Cobalt	0.3% max.	0.3% max.	0.3% max.
Chromium	..	0.10%-0.40%	0.10%-0.40%
Iron	..	0.65%-0.80%	0.30%-0.75%
Manganese	..	0.45%-0.60%
Nickel	Balance	Balance	Balance

Also, Coast Metals has admitted (Exhibit B at C.R. 147) that claim 1 of the '177 patent covers both Coast Metals' alloys No. 50 and No. 52 which, according to Plaintiff's own records and publications (Exhibit D at C.R. 171) have the following compositions:

	Coast Metals No. 50	Coast Metals No. 52
Nickel	93.25%	91.25%
Silicon	3.50%	4.50%
Boron	1.90%	2.90%

These two alloys, Coast Metals No. 50 and No. 52, coming within the scope of the claims of the '177 patent, have different physical, service and use properties. For instance, according to Plaintiff's own publication (Exhibit D at C.R. 171) Coast Metals No. 50 alloy has a melting point of 1900°F-1910°F, while Coast Metals No. 52 alloy has a melting point of 1790°F-1800°F. There is thus a difference of at least 100°F in the melting points of the two alloys made by Coast Metals and covered by the '177 patent (R.T. 82 and 83). Coast Metals has furthermore admitted in its response to Wall Colmonoy's Request for Admission No. 24 (Exhibit B at C.R. 150) that Coast Metals alloys No. 50 and No. 52 are used for different purposes, have different melting points, different hardnesses and different resistance to wear.

It is, therefore, clear that claims 1, 3 and 4 of the '177 patent cover a wide range of alloys which have some different physical, service and use properties and that these patent claims do not just cover Coast Metals No. 52 alloy and Wall Colmonoy's Nicrobraz 130 alloy, as repeatedly implied in Appellant's Brief.

III.

WALL COLMONOY PRIOR ART ALLOYS.

It was well known for many years prior to the filing of the application for patent which resulted in the '177 patent that changes in the proportions of constituents of nickel base alloys would affect or change certain of the physi-

cal, service or use properties of the alloys, but that such changes would not result in a new, unobvious or patentable alloy. Wall Colmonoy had for many years, and more than one year prior to the filing of the patent application which resulted in the '177 patent, manufactured and sold a family of nickel base, hard facing alloys designated as Colmonoy No. 4, No. 5, No. 6 and No. 20 which contained various proportions of nickel, silicon, boron, chromium and iron. There is no dispute about this and in fact it is admitted by Coast Metals in its response to Request for Admissions No. 35 to 38 (Exhibit B at C.R. 153). Wall Colmonoy, at the trial, by a large amount of evidence, proved the compositions of these alloys by analyses, manufacturing specifications and publications referred to in appendices B and C attached to Appellant's Brief and by reference to Wall Colmonoy's published manual (Exhibit AE and particularly pages 4 and 5 thereof at C.R. 327 and 328). The melting temperatures of Colmonoy alloys No. 4, No. 5, No. 6 and No. 20 vary between 1900°F and 2225°F because they contain different proportions of nickel, silicon and boron, chromium and iron. It furthermore will be noted that the Rockwell hardnesses vary from 18 to 61 and that they are designed and recommended for somewhat different purposes and have different service and use properties. All of these alloys, however, as well as the alloys covered by the '177 patent in suit, are alloys in a family having the same general characteristics and properties but with individual properties differing somewhat in accordance with the somewhat different chemical compositions. Appellant, in its Brief, pages 2-11 and 36, points to the fact that the chromium and boron in Wall Colmonoy's prior art alloys come from chromium boride crystals. This is true, but has nothing to do with the issues because the patents involved in this litigation simply refer to the presence of chromium

and boron in the alloys and do not limit or cover the manner or form in which these elements are incorporated in the alloys.

Even Mr. Cape, the alleged inventor and Coast Metals' director, testified (R.T. 73 and 74) that all alloys coming within the wide range and scope of the '177 patent had substantially the same properties and that any differences which did exist would be just a matter of degree. The large amount of evidence submitted by Wall Colmonoy as to the compositions of its prior art alloys and as to their properties, as well as the testimony of several witnesses resulted in the Court's Finding of Fact No. 6 which reads as follows (C.R. 47) :

“6. Prior to 1951 defendant originated, and commercially sold a family of nickel base, hard facing alloys having the properties referred to in the patents in suit including alloys designated Colmonoy No. 4, No. 5, No. 6 and No. 20. Defendant's alloys, Colmonoy No. 4, No. 5, No. 6 and No. 20 contained varying proportions of their constituents and demonstrated that such variations while affecting some properties of the alloys such as melting points, hardness and the like, did not produce entirely new alloys or nonanalogous results.”

There is no evidence to the contrary and Appellant's weak arguments about the nature of the evidence are contrary to the facts. Wall Colmonoy's vice president, L. V. LaRou, who has been with Wall Colmonoy since the 1930's testified, with voluminous supporting records and data, as to the composition and properties of these prior art Colmonoy alloys and when counsel for Coast Metals attempted to impeach this witness the District Court commented as follows about his line of attack (R. T. 364) :

“* * * in the case of his own client there wasn't a scrap of paper produced, so if this is a ground for impeaching this witness his client should be impeached even more readily, because he didn't produce one scrap of paper even. To my mind the argument wouldn't even be strong. I wouldn't be very much impressed by that type of argument.”

IV.

COMPARISON OF PROPERTIES OF ALLOYS DISCLOSED AND CLAIMED IN '177 PATENT WITH PROPERTIES OF PRIOR ART COLMONOY ALLOYS.

The '177 patent in suit (C.R. 72) sets forth the objects of the invention and the advantages and properties of the alloys disclosed in the patent in Column 1, lines 15-56. In summary the '177 patent relates that the objects of the invention are to provide alloys which :

(a) have unusual adherence properties, particularly the ability to adhere to stainless steel and pure molybdenum,

(b) are useful in the brazing or joining of strips or plates of stainless steel and in the hard facing of molybdenum,

(c) are particularly well adapted for hard facing at relatively low temperatures, where resistance to wear, impact, corrosion and oxidation are vital considerations or factors,

(d) are extremely resistant to oxidation at temperatures even up to their melting points,

(e) have melting points which are so low that they may be applied as facings to poppet valves and the like with considerably more ease than is possible when

using other facing metals commercially used for this purpose (“low melting points” are defined in the '177 patent in Column 2, lines 15-16 as being between 1750°F and 2100°F.),

(f) may be readily bonded with almost any variety of base metal, satisfactory bonds being obtained at temperatures far below those required when using conventional facing metals,

(g) have the curious property of being plastically formable over a relatively wide range of temperatures, i.e. as great as 150°F to 350°F,

(h) have low coefficients of expansion and may be “sweated” at temperatures below 2100°F.

L. V. LaRou, Wall Colmonoy vice president, who has been responsible for the development and production of many of Wall Colmonoy alloys testified that all of Wall Colmonoy's prior art alloys No. 4, No. 5, No. 6 and No. 20 had these characteristics and properties (R.T. 351-356). Coast Metals' expert and the assignor of the '177 patent, A. T. Cape, generally confirmed that Wall Colmonoy's prior art alloy, Colmonoy No. 6, the only one of Wall Colmonoy's prior art alloys which he had analyzed prior to the time he started any of his work on the alloys disclosed in the '177 patent, had these characteristics (R.T. 48-58 and 72). Cape did testify (R.T. 59), without any supporting evidence, that Colmonoy No. 6 did not have as good lead oxide resistance as alloys referred to in the '177 patent and that alloys disclosed in the '177 patent had better flow and impact resistance properties than Colmonoy No. 6 (R.T. 67 and 68). Cape admitted that he had no knowledge other than general familiarity with the other Colmonoy prior art alloys No. 4, No. 5 and No. 20 although he knew

they were on sale before he started his work on these alloys (R.T. 68 and 69). As can be clearly seen from Wall Colmonoy's catalog (Exhibit AE at C.R. 327-328) the prior art Colmonoy alloy No. 4 and No. 5 also have better impact resistance than Colmonoy No. 6 which was the only prior art alloy which Mr. Cape used in the comparison to which he testified.

Insofar as flow properties are concerned again Mr. Cape made no comparison between the flow properties of the alloys described in the '177 patent and Colmonoy prior art alloys No. 4, No. 5 and No. 20. Nor is there any mention in the '177 patent of these so-called flow properties. It is, however, interesting to note that Mr. Cape testified (R. T. 35) that the presence of chromium and iron in alloys of this type increases the fluidity and wetability of the alloys. An increase in fluidity and wetability means that the alloy will flow better. Mr. Cape's aforementioned testimony was to the effect that alloys coming within the scope of the '183 patent which is invalid because of the prior use and sale of the Colmonoy alloys, have better flow properties than alloys coming within the '177 patent. In addition, Coast Metals' expert and consultant R. C. Kopituk testified (R.T. 186 and 187) that Coast Metals alloy No. 53 covered by the invalid '183 patent flowed better than the Coast Metals No. 52 alloy covered by the '177 patent in suit. Furthermore, Kopituk testified (R.T. 187 and 188) that Coast Metals No. 50 alloy, which as pointed out above, is admitted to be an alloy coming within the scope of the '177 patent in suit had about the same flow characteristics as prior art Colmonoy No. 6 alloy. In view of this testimony and evidence, it is clear that no unusual or different flow properties are obtained with all alloys coming within the scope of the '177 patent as compared with the prior art Colmonoy alloys.

With regard to Cape's unsupported testimony that alloys coming within the scope of the '177 patent had excellent lead oxide resistance he admitted (R.T. 76) he did not know whether an alloy coming within the scope of the '177 patent and containing just less than 5% chromium and iron would have good lead oxide resistance and he testified that the alloys referred to in the chart in Column 2 of the '177 patent probably contained less than 1% chromium. He also admitted that Coast Metals never sold any alloys coming within the scope of the '177 patent for use on gasoline engine poppet valves which is the most common application or use where excellent lead oxide resistance is required. He admitted that Coast Metals had sold "Eatonite", a completely different type of alloy for coating gasoline engine poppet valves, but had not sold alloys covered by the patents in suit for that purpose. In addition, Coast Metals' technical director, C. B. Foerster, testified (T.R. 513) that Coast Metals No. 52 alloy had never been sold for the purpose of coating poppet valves but that he had heard that some other alloy having a lower percentage of silicon and boron than Coast Metals No. 52 alloy had been reported to have satisfactory lead oxide resistance, but he never saw the results of any tests. Mr. L. V. LaRou, Wall Colmonoy's vice president, testified (T.R. 356 and 357) that Wall Colmonoy's Microbraz 130 alloy which is charged to infringe the '177 patent was not designed to have lead oxide resistance and that its lead oxide resistance would be far inferior to the lead oxide resistance of completely different commercial materials such as "Eatonite" which was sold by Coast Metals. There is, therefore, no credible evidence in the record that alloys covered by the '177 patent in suit have lead oxide resistance at all comparable to other commercial alloys being sold for applications such as the coating of poppet valves where such resistance is necessary.

Appellant in its Brief has continuously referred to the fact that alloys covered by claims 1, 3 and 4 of the '177 patent in suit have an unusually low melting point, far below that of the prior art Wall Colmonoy alloys (see Appellant's Brief, pages 5, 6, 18, 22, 23, 34, 44, 45, 47, 52, etc.). This argument is simply not in accordance with the evidence, and, in fact, is completely contrary thereto. For instance, the evidence clearly shows that Coast Metals own alloy No. 50, admittedly covered by the '177 patent, had a melting point of 1900°F-1910°F, which is over 100°F higher than the melting point of Coast Metals No. 52 also covered by the '177 patent. The evidence further shows (Exhibit AE at C.R. 327) that prior art Colmonoy No. 6 alloy has a melting point of 1900°F which is substantially identical to the melting point of the Coast Metals No. 50 alloy covered by the '177 patent.

In addition, Coast Metals sells an alloy designated as its No. 56 alloy, which according to Coast Metals catalog (Exhibit D at C.R. 171) and according to Coast Metals' expert and alleged inventor, A. T. Cape, is generally similar to prior art alloy Colmonoy No. 6 and has about the same amount of chromium as Colmonoy No. 6 (R.T. 55-56). It has been admitted by Coast Metals (Exhibit B at C.R. 146) that its No. 56 alloy is outside the scope of even the '183 patent which required the presence of from 5% to 12% of chromium and iron because it contains approximately 15% chromium (C.R. 171) which is about the same amount of chromium as in Colmonoy No. 6. It furthermore has been admitted by Coast Metals that its No. 56 alloy, which is outside the scope of the '177 patent and is generally similar to Colmonoy No. 6 has a lower melting point than Coast Metals No. 50 alloy covered by the '177 patent in suit (Exhibit B at C.R. 151). Thus, the evidence shows that Coast Metals own alloy containing 15% chromium and generally

similar in chemical composition to the prior art Colmonoy No. 6 alloy, has a lower melting point than alloys coming within the scope of the '177 patent and a melting point within 20°-30° of the lowest melting point which Coast Metals can point to for any of its alloys coming within the scope of the '177 patent.

Still further Coast Metals catalog (Exhibit D at C.R. 171) clearly shows that Coast Metals No. 53 alloy covered by the invalid '183 patent, has a melting point of 1790°-1800°F which is identical to that of its No. 52 alloy disclosed in the '177 patent. The lack of criticality of the melting point of these alloys is further demonstrated by the fact that A. T. Cape testified that the presence of 1% carbon in an alloy disclosed in the '177 patent could change its melting point by 50° but that this was not a significant difference which would have any effect on its properties (R.T. 63 and 64).

Still further, the '177 patent in suit (Exhibit 1 at C.R. 72) specifically defines the term "low melting point" as anywhere between 1750°F and 2100°F. Both Wall Colmonoy's prior art alloys Colmonoy No. 4 and Colmonoy No. 5 have melting points below 2100°F (Exhibit AE at C.R. 327) and therefore are low melting alloys of the type referred to in the '177 patent.

Appellant in its Brief at pages 6, 7 and 43-48 spends considerable time discussing Wall Colmonoy's search for a low melting nickel base, brazing alloy and relies on this as demonstrating the lack of obviousness of the alloys referred to in the '177 patent. What Appellant's Brief fails to state, however, is that all of the evidence and testimony referred to in the aforementioned portions of Appellant's Brief is with reference to Wall Colmonoy's alloy designated as its LM Microbraz which is not covered by the '177

patent but is within the scope of Coast Metals '183 patent which has been adjudicated invalid. In other words, all of the testimony of Wall Colmonoy's vice president, L. V. LaRou, (R. T. 341-342, 395-396) and the correspondence (Exhibit AP at C.R. 411) referred to at page 45 of Appellant's Brief, refer to an alloy outside the scope of the '177 patent but within the scope of Coast Metals '183 patent, now invalid. It is hard to see how Coast Metals can base or support their arguments as to lack of obviousness of the '177 patent on evidence relating to an alloy clearly outside of this patent and only within the bounds of a patent which has been finally adjudicated to be invalid.

While Appellant argues in its Brief that alloys covered by the '177 patent differ substantially from Wall Colmonoy prior art alloys such argument is refuted by the aforementioned evidence which clearly demonstrates that the '177 patent does not cover only alloys having a melting temperature of the order of 1800°F, but covers alloys having considerably higher melting temperatures and that Wall Colmonoy's prior art alloys had melting temperatures as low as alloys coming within the scope of the '177 patent. The evidence also clearly demonstrates that alloys, such as Coast Metals No. 53 and No. 56, outside the scope of the '177 patent have melting temperatures as low as the melting temperatures of any, and below those of others of the alloys coming within the scope of claims 1, 3 and 4 of the '177 patent. While one particular alloy within the wide range of the '177 patent may have a slightly different characteristic than one or more of the Wall Colmonoy prior art alloys, such as a slightly lower melting point, the same is true of alloys coming within the scope of the '177 patent, such as Coast Metals alloys No. 50 and No. 52, as pointed out above. According to the testimony of Mr. Cape, the alleged inventor (T.R. 64, 65, 73 and 74), such differences

are a matter of degree and all of the alloys covered by the patent claims 1, 3 and 4 have the same properties. Such testimony by the alleged inventor further confirms Wall Colmonoy's position that all of the alloys previously sold by it, the alloys covered by the invalid '183 patent and the alloys covered by the claims of '177 are all part of a family of alloys having the same general properties with only slight changes in degree of the properties as the proportions of constituents in the alloys are varied.

Still further the evidence shows that the proportional or percentage limitations for each ingredient recited in the patent claims are indefinite and not critical. A. T. Cape, during redirect examination, by Coast Metals' attorney testified that the expression "about 6%" for chromium which appeared in the '183 patent, usually meant 6½% or 7% and that it was not possible to precisely state what a percentage limitation is (R.T. 138). The patent claims therefore are not definite and do not distinctly point out and claim invention as required by the patent laws.

V.

EVIDENCE WITH RESPECT TO FINDINGS OF FACT NOS. 8 AND 10 AND 13.

For the reasons pointed out above it is clear that the evidence fully supports the District Court's Finding of Fact No. 10 (C.R. 48) that Wall Colmonoy's publicly used alloy No. 4, No. 5, No. 6 and No. 20 had the characteristics and service or use properties which are referred to in the patents in suit for the alloys disclosed therein. Appellant has argued in its Brief that it is not just the properties referred to in the patent which are important or relevant, but any and all properties of the alloys whether mentioned

in the patent or not. As pointed out above, alloys coming within the scope of the '177 patent have various service and use properties including various melting points, hardnesses, wear resistance, etc. and while some of the specific alloys coming within the broad range of claims 1, 3 and 4 of the '177 patent may have one particular property which differs somewhat from a comparable property in one of the Colmonoy prior art alloys the evidence clearly establishes that the Colmonoy prior art alloys had properties which so overlapped and were interwoven with the properties of the alloys disclosed in both the invalid '183 patent and the '177 patent in suit that no non-analogous or unusual properties are obtained in alloys coming within the broad range of the '177 patent. Therefore, the claims of this patent are invalid as not defining alloys which are sufficiently different in their use or service properties as to constitute invention and arise to the dignity of invention.

The District Court's Findings of Fact No. 8 and 13 (C.R. 48 and 49) found that an alloy coming within the scope of the '177 patent in suit and containing slightly less than 5% chromium and iron did not differ to any significant extent in service or use properties from an alloy coming within the scope of the invalid '183 patent (Finding No. 13) or from Wall Colmonoy's commercial alloy Colmonoy No. 20 (Finding No. 8). These Findings of Fact are based on the evidence and record discussed above as well as additional testimony, test data and evidence.

The invalid '183 patent (C.R. 74) states that the alloys disclosed therein have all of the advantages and properties of the alloys of the '177 patent, but, in addition, have improved oxidation resistance over the alloys of the '177 patent and have a higher microconstituent hardness. In order to disprove this, Wall Colmonoy, through its ex-

pert and assistant director of research, F. M. Miller, put in evidence physical specimens (Exhibit DM, DN and DO) in which surfaces have been coated with alloys coming within the scope of the '177 patent and with alloys coming within the scope of the invalid '183 patent. These specimens were made in accordance with recognized procedures and the specimens were exhibited in Court and they showed that an alloy within the scope of the '177 patent and containing practically no chromium and iron had poorer oxidation resistance than the other two alloys where oxidation resistance was substantially the same (R.T. 526). One of the latter alloys came within the scope of the '177 patent and contained slightly less than 5% chromium and iron and the other alloy contained more than 5% chromium and iron and came within the scope of the invalid '183 patent as well as the manufacturing specification (Exhibit AD at C.R. 323) for Colmonoy No. 20 alloy, as has all Colmonoy No. 20 made since 1940 (R.T. 318 and 319). In addition, Mr. Miller prepared physical specimens using the latter two alloys which were photomicrographed and subjected to a microconstituent hardness testing procedure. The photomicrographs and hardness data (Exhibits DP and DQ at C.R. 442 and 444) made by an independent laboratory were put in evidence and these showed that there was no appreciable difference in the microconstituent hardness of alloys coming within the scope of the '177 patent and the '183 patent. The District Court had the opportunity to examine all of this data and to listen to the testimony of the expert witnesses relative thereto and drew its Findings of Fact in accordance with the evidence presented.

VI.

CLAIMS 1, 3 AND 4 OF THE '177 PATENT DO NOT MEET THE CONDITIONS FOR PATENTABILITY REQUIRED BY THE PATENT LAWS.

Claims 1, 3 and 4 of the '177 patent do not meet the conditions for patentability required by the patent laws. The patent laws of the United States, 35 U.S.C., Section 102(a) and 102(b) provide:

“A person shall be entitled to a patent unless—

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.”

In addition to the aforementioned provisions the patent laws of the United States, 35 U.S.C., Section 103 provide:

“A patent may not be obtained though the invention is not identifiably disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

The law is clear that while there may be patentable novelty either in the elements of an alloy or the proportions of such elements there cannot be patentable novelty unless

the resultant alloy provides a new material or an old material with new characteristics of structure or performance embodying entirely new or at least substantially enhanced qualities of utility.

In *VanBrodie Milling Co. v. Cox Air Gauge System*, DC S.D., Cal., 161 F.S. 437, 442 (affirmed CA 9 at 279 F. 2d 313) the court said:

“So the courts have recognized, at times, invention to consist of combining certain elements in certain definite proportions, but only when an entirely new and non-analogous result is obtained.”

And quoting from *Bethlehem Steel Co. v. Churchward International Steel Co.*, CA 3, 268 F. 361, 364, the court said:

“But novelty of proportions in the sense of the patent law involves something more than figuring out proportions differing from any that were known before. It involves new results from new proportions, developing a new metal, or, it may be, an old metal with new characteristics of structure or performance, embracing entirely new, or at least substantially enhanced, qualities of utility.”

See also *Darwin and Milner v. Kinite Corp.*, CA 7, 72 F. 2d 437.

While a composition may constitute a more effective combination of familiar ingredients than those previously used, if the composition differs from the prior art only in degree or as to certain properties and no startling, unexpected or radical result is produced such composition is not patentable. See *Minnesota Mining & Manufacturing Co. v. Coe*, 99 F. 2d 986, CA D.C.; *Railroad Supply Co. v. Elyria Iron & Steel Co.*, 244 U. S. 285, 292, 61 L. Ed. 1136;

David Belais, Inc. v. Goldsmith Brothers Smelting and Refining Co., CA 2, 10 F. 2d 673, 675; *Sherwin-Williams v. Margall*, CA D.C. 190, F 2d 606, 607.

In the case of *Minnesota Mining & Manufacturing Co. v. Coe* (*supra*) the Court said at page 989:

“The use of mere skill to produce a desired improvement does not constitute invention. Nor is invention found in every slight advance which is made through the skill of those who, by reason of their employment, are aware of the constant demand of industry for new and improved appliances. The word skill, as used in this case, is equally applicable to a chemist as to a mechanic, and to a laboratory as to a workbench.”

“But a showing of great industry in experimental research is not in itself sufficient to constitute invention, when the product thereof differs from those of the prior art only in degree and the result—no matter how useful it may be—is merely one step forward in a gradual process of experimentation.”

In application of *Aller*, C.C.P.A., 220 F. 2d 454, 456 the Court said:

“More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable range by routine experimentation.”

The law is also clear that where the patent claims do not particularly point out and distinctly claim subject matter regarded as invention and clearly differentiate it from what went before in the art, they foreclose future enterprise with the resources of the prior art and are invalid for failure to comply with the statute, 35 U.S.C., Section 112, which provides:

“* * * The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”

This is the law clearly established by the Supreme Court in *United Carbon Company v. Binney & Smith Company*, 317 U.S. 228, 236, 237; 87 L. Ed. 232, 237, 238 in which the court stated:

“The statutory requirement of particularity and distinctness in claims is met only when they clearly distinguish what is claimed from what went before in the art and clearly circumscribe what is foreclosed from future enterprise. * * * Whether the vagueness of the claim has its source in the language employed or in the somewhat indeterminate character of the advance claimed to have been made in the art is not material. An invention must be capable of accurate definition, and it must be accurately defined, to be patentable.”

See also *General Electric Company v. Wabash Appliance Corporation*, 304 U.S. 364, 369; 82 L. Ed. 1402, 1405, 1406; *Graver Tank & Manufacturing Company, Inc. v. Linde Air Products Company*, 336 U. S. 271, 277; 93 L. Ed. 672, 677, 678; *Wayne et al. v. Humble Oil & Refining Co.*, 175 F. 2d 230, 234 (C.A. 5); and *Burroughs Adding Mach. Co. v. Felt & Tarrant Mfg. Co.*, 243 Fed. 861, 869, 870 (C.A. 7).

In *Dow Chemical Co. v. Halliburton Oil Well Cementing Co.*, 324 U. S. 320, 90 L. Ed. 973, 975 the Supreme Court said:

“A patent claim must be based on an invention or discovery. If the invention depends upon the alleged discovery of certain limits or points, then no invention has been made, if such point or limit do not exist in fact.”

The United States Supreme Court has commented with regard to patent claims covering a combination of elements in *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U. S. 147, 95 L. Ed. 162, 167:

“Court should scrutinize patent claims with a care proportionate to the difficulty and improbability of finding invention in an assembly of old elements.”

It is clear that the alloys defined by claims 1, 3 and 4 of the '177 patent do not distinctly claim an alloy or a plurality of alloys which are sufficiently different from the prior art alloys to arise to the dignity of invention as required by the patent laws and the court's interpretation thereof.

VII.

COMMENTS RE APPELLANT'S ARGUMENT RELATIVE TO THE PROBLEMS OVERCOME BY THE PATENTED ALLOY AND COMMERCIAL ACCEPTANCE OF THE SAME.

Appellant's Brief at pages 12 and 13 discusses how Coast Metals No. 52 alloy allegedly solved a brazing problem in rocket engine thrust chambers and to the testimony of Mr. R. C. Kopituk of Reaction Motors in this connection. Contrary to the argument made by Appellant in its Brief, Mr. Kopituk testified (R.T. 185 and 186) that Coast Metals No. 52 alloy, covered by the '177 patent was not as satisfactory for use in the rocket engine thrust chambers as Coast Metals No. 53 alloy, covered by the invalid '183 patent and outside the scope of the '177 patent. Kopituk furthermore testified that Coast Metals No. 50 alloy, also covered by the '177 patent in suit, could only be used for brazing in thrust chambers with difficulty and was comparable to

prior art alloy Colmonoy No. 6. Kopituk testified that he had no knowledge of the use of Coast Metals No. 52 alloy as a hard facing metal although he had some experience in using Coast Metals No. 53 alloy, covered by the invalid '183 patent, for hard facing. This testimony confirms the testimony of Wall Colmonoy's vice president, L. V. LaRou, that Wall Colmonoy's alloy, Nicrobraz 130, charged to infringe the '177 patent in suit, is used only as a brazing alloy and is not a hard facing alloy.

Appellant's Brief at pages 13 and 14 and 51-57 and 58 points to the fact that an Aeronautical Material Specification No. 4778 (Exhibit 6 at C.R. 78-79) was issued in 1955 which was based on Coast Metals No. 52 alloy and that Wall Colmonoy copied and imitated Coast Metals alloy No. 52. There is no evidence that Wall Colmonoy copied any alloy. Wall Colmonoy does sell an alloy coming within the range of the AMS specification, but this specification does not mention any Coast Metals alloy nor any patent. In fact AMS specification 4778 calls for an alloy having a chemical composition different from the chemical composition of Coast Metals No. 52 alloy (Exhibit 3 at C.R. 75) and a composition outside the range of claim 4 of the '177 patent which Coast Metals contends defines the optimum chemical composition for alloys coming within the scope of this patent. Appellant's Brief furthermore fails to mention that in 1960 the AMS specification 4778 was revised as AMS specification 4778-A (Exhibit 1 at C.R. 259) and that when this specification was revised the proportions of the ingredients such as silicon, nickel, boron, carbon and iron were changed, and the melting point requirements were changed (R.T. 190-193).

AMS specifications have been issued which are based on many commercially used alloys such as Wall Colmonoy's

“Standard Nicrobraz”, Coast Metals No. 50 alloy and Coast Metals No. 53 alloy, covered by the invalid '183 patent. It is to the user's advantage to have AMS specifications issued on alloys that it wants to use so that the alloys can be purchased from different suppliers under the specification numbers and the Government requires that these specifications be made of record so that the alloys can be purchased from the lowest bidder. Even if it is assumed that any of the alloys involved in this litigation have had any significant commercial success, and there is no evidence to this effect, other than that they have been used and sold, the law is clear that commercial success is not proof of invention and will not make patentable that which is not an invention. See *Lempco Products v. Timken Axle Co.*, CA 6, 110 F. 2d 307; *Dow Chemical Co. c. Halliburton Oil Well Cementing Co.*, 324 U. S. 320, 89 L. Ed. 973, 976.

VIII.

THE PATENT OFFICE WAS MISLED INTO GRANTING THE '177 PATENT.

During the prosecution in the United States Patent Office of the patent application which resulted in the '177 patent, the Patent Office Examiner continuously and finally rejected the claims of the '177 patent (Exhibit E at C.R. 181, 187, 193, 194) unless the applicant could indicate why the alloys specified in prior art British patent No. 580,686 (Exhibit F at C.R. 207) did not have the properties of the claimed alloys. In response to the rejections by the Patent Office, Coast Metals attorney stated that the British patent in all cases included aluminum in the alloy in an amount of at least 0.1% and that the presence of aluminum in an alloy of the type disclosed in the '177 patent even in as small an amount as 0.1% would produce a violent gassing

of the alloys which would destroy their ability to adhere to stainless steel and pure molybdenum, which according to Coast Metals attorney was the outstanding characteristics of these alloys (C.R. 183 and 199). Furthermore, applicant's attorney argued that the British patent permitted the presence of certain other elements, including titanium, and that the presence of titanium in the alloy of the '177 patent would be actually deleterious to the alloy (C.R. 191).

The evidence clearly establishes that both of these representations made to the Patent Office Examiner were not true. With regard to the presence of titanium Coast Metals has admitted (No. 33 Exhibit B at C.R. 152) manufacturing and selling a nickel-silicon-boron alloy of the type having generally the same percentage of nickel-silicon-boron as Coast Metals No. 52 alloy which contains titanium. In view of this admission the presence of titanium cannot be deleterious to alloys coming within the scope of the '177 patent, but actually enhances the alloy properties for certain uses.

The evidence furthermore clearly shows that the statements made to the Patent Office Examiner that the presence of aluminum in an alloy of the '177 type, would adversely affect its ability to adhere to stainless steel and molybdenum were false and constituted misrepresentations which the Patent Office Examiner accepted as true in allowing the claims in the '177 patent. This can be seen from an examination of the file history of the '177 patent (at C.R. 205) wherein the Examiner's handwritten note reads as follows: "Interview with Gardiner, July 2 '55, LeRoy okayed cls—proposed amendment along these lines. Note the Brit. ref. (examples) have aluminum whereas applicant stresses the detrimental features of aluminum."

In order to demonstrate to the District Court that the presence of small amounts of aluminum in alloys of the type referred to in the '177 patent would not deleteriously

affect the ability of the alloy to adhere to stainless steel and molybdenum, Wall Colmonoy's assistant director of research, F. M. Miller, had an alloy prepared like the accused alloy Nicrobraz 130 to which was added an aluminum content of over 0.1% (Exhibit DW at C.R. 449) and Mr. Miller supervised brazing and coating tests of this aluminum containing alloy on stainless steel and molybdenum and made comparisons of the coated and brazed specimens with specimens coated and brazed with an identical alloy which did not contain aluminum (T.R. 543-545). Mr. Miller explained in detail how these tests were conducted and showed the District Court the actual specimens (Exhibit DX) which were brazed and coated with the aluminum containing alloy and the non-aluminum containing alloy. These specimens along with Mr. Miller's testimony clearly showed that the aluminum containing alloy satisfactorily coated the molybdenum and satisfactorily brazed stainless steel parts together and that the joint obtained in the brazed parts was strong, as indicated by a twisting test applied to the brazed specimens (T.R. 546-549). Coast Metals' technical director, C. V. Foerster, also testified regarding some tests he had run on alloys covered by the '177 patent to which even larger amounts of aluminum had been added and that such alloys did adhere to stainless steel and were as satisfactory as non-aluminum containing alloys covered by the '177 patent except for their color or appearance (R.T. 645). These tests, therefore, clearly demonstrated to the District Court that an alloy of the type covered by the '177 patent with .1% aluminum was satisfactory for brazing and coating stainless steel and molybdenum and that the Patent Office Examiner was misled into allowing claims 1, 3 and 4 of the '177 patent. The misleading of the Patent Office Examiner destroys the normal presumption of validity to which a patent is usually entitled.

It furthermore is clear that while the alloy examples set forth in the complete specification of the British patent No. 580,686 (Exhibit F at C.R. 207 and 208) all disclose the presence of aluminum, the provisional specification which appears on the first page of the patent does not require the presence of aluminum in the alloys disclosed. The provisional specification of the British patent discloses an alloy containing silicon in a proportion which may be in the range of the '177 patent, several materials, one of which may be boron, in a proportion within the range of the '177 patent, and the balance being nickel. This is clearly demonstrated by the bar graph (Exhibit DT at C.R. 447) which compares the composition of the alloys described in the British patent No. 580,686 with all of the claims of the '177 patent in suit. The evidence presented to the District Court, therefore, clearly shows that the United States Patent Office would not have allowed the '177 patent over British prior art patent No. 580,686 if the Examiner had not been misled, and for the reasons set forth above, the British patent constitutes a sound prior art reference which invalidates the claims 1, 3 and 4 of the '177 patent.

CONCLUSION

The evidence in the record clearly supports all of the Findings of Fact of the District Court and supports the judgment below that claims 1, 3 and 4 of the '177 patent are invalid and not infringed by Wall Colmonoy.

The judgment of the District Court should be affirmed.

Respectfully submitted,

LYON & LYON,

Attorneys for Wall Colmonoy Corporation, Defendant-Appellee,

By CHARLES G. LYON.

Of Counsel:

HARNESS, DICKEY & PIERCE,

By DON K. HARNESS

NEAL A. WALDROP

CERTIFICATE

I certify that, in connection with the preparation of this Brief, I have examined Rules 18 and 19 of the United States Court of Appeals for the Ninth Circuit, and that in my opinion, the foregoing Brief is in full compliance with those rules.

Don K. Harness

PROOF OF SERVICE

Don K. Harness, counsel for Appellee, Wall Colmonoy Corporation, in the above entitled matter hereby certifies that three (3) copies of the foregoing Brief were placed in the United States mail, air mail, special delivery, with postage fully prepaid, addressed to Christie, Parker & Hale, 595 East Colorado Street, Pasadena 1, California, on this 18th day of December, 1962.

Don K. Harness

